



## **Contractors Proposals**

**For The**

**Design and Construction of a Single Storey Prefabricated Modular  
Building**

**For**

**The four classroom extension (flat roof option)**

**At Alders Community High School.**

## **Contents**

## 1. Design

Our organisation possesses the expertise, experience, and proven capability to fulfil the contract needs. In creating bespoke buildings which meet clients' exact specifications, we are able to provide a turnkey modular service from initial consultation through to final installation, providing a seamless one stop solution. Expert design, build, and installation teams, based at our state-of-the-art production facility, have a passion for excellence. Clients such as Essex County Council and Croydon Council tell us they value the way in which we take care of every individual element of the project, ensuring a smooth and efficient service, whilst maintaining highly competitive prices.



## History

Our unrivalled pedigree within the modular building sector stretches back 30 years, when the first iteration of the company, AS System Building Services, was founded to provide installation and maintenance services specifically to the modular building industry. The move into construction was a natural progression, and in 1991, Elite Systems GB was incorporated as a modular building manufacturer, specialising in off-site construction. During that time, our family-run business has established a reputation for excellence, delighting clients through use of innovative designs, sustainable technologies, and professional customer service.

Today, we deliver modular buildings to clients across the UK from our base in Cleckheaton, West Yorkshire, where a skilled team of specialists including surveyors, designers, and structural engineers manage every step of the process, from design to installation. Using the skills and expertise developed over a generation, we provide bespoke modular buildings for the commercial sector including healthcare, education, leisure, and transport.



## Experience



Annually, we design, build, and install more than 30 bespoke modular buildings, including single and multi-storey buildings for use as classrooms, with timber cladding, brick finishes, flat mono, flat duo, and pitched roofs, each produced to meet our clients' exact specifications. By working in partnership with structural engineers and planning, acoustic and M&E consultants we deliver a full turnkey service to clients including:

- **Essex County Council.**  
Under a long-term ongoing contract, commencing in 2013, we currently supply modular buildings for use in the education sector. Zero latent defects have occurred during the last four years, ensuring complete customer satisfaction.
- **Croydon County Council.**  
A total of 10 classrooms were supplied over a two-year period, fulfilling 100% of their needs, including achieving KPIs for on time and within budget completion.



- **Hampshire County Council.**

We designed, built and installed specialist buildings such as the Stubbington Study Centre, an outward bound centre for children, which had to match the existing timber-clad buildings on site. For the duration of the project, the site remained live, with the existing building being demolished after the handover of the new building. By holding weekly site meetings to plan the work, we ensured the premises remained in use without the risk of injury or disruption.



Additionally, in maintaining places on public sector frameworks such as Fusion 21 and Crown Commercial Services, we have supplied buildings directly to clients including NW RFCA, HMP Services, Sheffield Hallam University, and several NHS trusts. We therefore have a strong understanding of the public sector and are experienced in working with education bodies to install classrooms with minimal disruption.

### **Assurances of quality**

A series of accreditations, memberships, and certifications are maintained and verified through robust audits and inspections, providing assurances of the provenance and quality of our work. These include:

- **ISO9001 UKAS-certified QMS** (quality management system), providing policies and procedures which ensure consistently high quality workmanship, reliability, and continuous improvement across all areas of our operation.





- **ISO14001-certified EMS**  
(environmental management system) to ensure waste disposal arrangements and initiatives to minimise our carbon footprint are embedded into both our own working procedure and into the design and buildings we create.



- **OHSAS18001-certified**  
for our occupational health and safety management system, which provides a supportive working environment for staff, enhanced by ongoing training and development.



- **CHAS, Constructionline, Achilles, and LABC accreditations,**  
recognising the effectiveness of our health and safety procedures, and total commitment to zero harm for staff, building users, and the public.
- **TRADA Considerate Constructors and MPBA memberships,**  
enabling us to remain at the forefront of industry developments, access the latest recommended best practices, and play a leading role as a respected voice within our industry.

Further, in 2017, our standard model building has achieved a 'pass' BREEAM rating, together with an average air permeability test result of 2.99 and an EPC rating of B/C, providing assurances for customers by evidencing the energy efficiency and sustainability of our buildings.

### Unrivalled expertise

With more than 30 years' experience, assurances are provided that our workforce of 30 highly trained and qualified staff have an unrivalled understanding of modular buildings. Staff enjoy working for us and staff turnover has been zero during the past five years, meaning that our

expertise and understanding of client needs develops year-on-year through retained knowledge and experience, allowing effective business relationships to develop. Key personnel include:

**Managing Director, Marcus Sutcliffe.**

Strong leadership and strategic guidance are provided through a hands-on approach which means that Marcus is a familiar presence in our production facility and at client premises. Prior to his 17-year career with us, Marcus gained valuable experience as an engineer, enabling him to contribute in technical and commercial areas.



**Production Manager, Darren Idle.** Through his 17-year career with us, Darren has progressed from an apprentice joiner, to a carpenter, and then supervisor, and was supported to gain an LIM level 4 award in Leadership and Management in 2012. In becoming one of our senior managers, he provides an inspirational example for others and has helped to embed our family values across the business.



**Technical Manager, Jamie Gee.** With a Master's degree in engineering design, Jamie is well placed to provide technical support and has been a valued member of our team since 2009. He works within our production facility and is on hand to oversee installations, ensuring final quality checks are completed correctly.



**Commercial Manager, Jason Bowker.** In completing 30 years' industry experience, Jason trained as a junior estimator and then quantity surveyor, giving him a detailed understanding of modular buildings. His role is to ensure projects are completed within budget and to manage the client relationship. He played a leading role in the creation of the Jane Lane project, the design and build of a new £420,000 sixth form building for the special educational needs school.





As a family-run business operating for over 30 years, we embrace traditional business values. We are proud to have an established and long serving workforce, including **30 skilled tradesman** each with more than five years' service. Similar pride is taken in establishing long term business relationships and securing a high level of repeat orders, which demonstrate the overall quality of our operation.

At the end of a project, clients typically tell us that they are 100% satisfied and that we have exceeded their expectations by delivering a seamless service better than they have ever experienced, which they attribute to our attention to detail, and genuine passion for modular buildings.

1. Project requirements.
2. Quotation.
3. Contractors Proposals.
4. Material Specifications.



Alders Community High School  
Mottram Old Road  
Hyde  
SK14 5NJ

**04 Jun 2019**

**Quotation, 1906-1A, Four Classroom extension, flat roof proposal.**

Thank you for your recent valued enquiry, we have pleasure in submitting our quotation as follows.

Our price to manufacture, deliver & install your high specification single story modular building is  
£280,070.17 exc.VAT

The Buildings will be constructed from a steel frame, including a steel / timber frame floor and roof.

The building will have a floor to ceiling height of 2.4 metres. The buildings will be complete with all mechanical and electrical installations as described in the detailed Specification.

Building Size: 18.0 x 18.0 metres

Outline Specification is as follows:

This is the Premier 3000 Range Quotation Description

**GENERAL SUPERSTRUCTURE**

The superstructure will be a single storey hybrid timber/steel frame

**EXTERNAL WALLS**

Tata Colorcoat LG Bonded to 9mm Plywood

**ROOF**

Single ply EPDM membrane on 9mm roof decking.

**CEILING FINISH**

Owa Constellation 600 x 600 tiles in white 24mm T-section grid with black shadow batten.

**RAINWATER GOODS**

Black Polypipe black plastic square profile. With all necessary brackets, fittings, drain adapters etc. Downpipes are square black plastic. All items to be fixed in accordance with the manufacturer's instructions.

**INTERNAL WALLS**

Foil backed, pre finished with vinyl wallpaper applied to 15mm plasterboard.

**FLOOR COVERINGS**

Heckmondwike Supacord heavy duty contract carpet, anti-slip vinyl to corridors and store rooms and barrier matting to entrance.

#### MISCELLANEOUS ITEMS

Building Manual.  
Building Regulations Application.  
Final Clean.  
SBEM Assessment.  
Site Supervisor.  
Waste Removal.  
Welfare Unit.

#### EXTERNAL ITEMS

2nr External Steel Door and frame, Double with Part M Glazing, 1000mm

#### INTERNAL ITEMS

6nr Door's Internal, FD30 Single, 2 No Glazing panels. with Lock, Cylinder, closer,  
4nr Door's Internal, FD30 Single, Flush. with Lock. Cylinder, Closer.  
79m Partition, 2400mm, Acoustic 1 hour Vinyl, per LM.  
79m Partition, Acoustic, Additional 400 mm if required, 1 hour, per LM.

#### M&E WORKS

48no Tam-lite PLG 600mm x 600mm Recessed LED Lighting Panel c/w HFD, 12no per Classroom including 2no emergency version per classroom  
11no Tam-lite PLG 600mm x 600mm Recessed LED Standard Panel to corridor and activity Rooms including 5no emergency version  
4no Tam-lite euro LED to Storerooms, all are emergency version  
2no LED Emergency Exit Box to Escape Route Doors  
2no LED External Emergency Bulkhead Light to External Doors  
1no LED External light c/w Photocell and Timeclock Control  
8no Daylight Dimming Control to Classroom Lights, 2 per classroom  
6no PIR Control to Storerooms and activity rooms  
15no Supplies to Fixed Equipment, 4no A/C, 4no Panel Heater, 1no Fire Alarm, 1no Intruder Alarm, 1no Data System, 4no tubular heater, intruder alarm,  
1no 3-Phase Mains Distribution  
42mtrs Dado Trunking c/w Accessories, 9mtrs per classroom, 3mtrs per activity room  
44no Socket Outlets, 9no per Classroom, 3no to activity Rooms and 2no to corridor  
4no Panel heaters, 2no to corridor, 1no per activity room c/w thermostat control  
1no First Fix only to 18no Fire Alarm points for completion by schools nominated contractor  
4no Daikin Ceiling Mount 7.1KW A/C Cassette to Classrooms  
4no A/C Materials  
4no A/C Installation  
4no External A/C Condenser Cage  
Testing and Commissioning to BS 7671

#### ADDITIONAL ITEMS

Glass screen to activity rooms  
Plasterboard mf ceiling to corridor perimeter.  
Steel floor, to allow level access.  
Upvc windows to classrooms

**Erection: £7,910.00**

**Delivery to Site: £9,040.00**

**Crane: £1,356.00**

**Contract Sum: £283,070.17**

**Additional options;**

Brick slip cladding to the external elevations. - £30,700.00

1no Stand Alone Intruder Alarm System c/w 1no Remote Panel, 1no Keypad, 12no PIR sensor, 2no Door Contact, 1no External Bell Box - £2647.00

1no Cat 6 Data Installation c/w 1no 3U Data Cabinet, 1no 24 Port Patch Panel, 40no Data Module, 8no per Classroom and 4no to Activity Rooms - £2,539.00

4no CO2 Monitoring, 1no per Classroom - £1,656.00

For installation of ventilation system linked to CO2 monitor, 1no per Classroom - £3,768.00

DESIGN CRITERIA / MATERIALS AND WORKMANSHIP

The works will be constructed in accordance with the relevant approved design drawings and specification which will be prepared by Elite systems design Dept., Structural Engineers and Acoustic Consultant employed by ourselves as part of the Design and Build contract.

EXCLUSIONS

V.A.T. applicable at the current rate. Insurance of the building once handed over to the client.

Firefighting equipment. Intruder alarms and monitoring equipment. I.T. Installations.

Telephone Points, lines and installations. Planning Applications and associated costs.

Road closures, temporary roadways, site security fencing and welfare facilities.

Scaffolding, if required. Groundworks, including foundations, access ramps and steps.

Drainage surveys, connections and testing.

Services, and service connections, if services are not available additional fees will be raised to cover the cost of additional site visit and testing.

PLEASE NOTE

To single storey buildings a plywood skirt to an average depth of 600mm around the perimeter of the building.

Double storey buildings, plywood skirt to top of foundation pad.

ASSUMPTIONS

The building quoted is external dimensions. This quotation is valid for 60 days from date shown.

Elite Systems quotation and Contractors Proposals take precedence over any tender information, unless agreed by all parties.

Our site erection costs are based on an un-interrupted 10 hour working day.

Roof works will be carried out with an inertia reel connected to either the crane or a secure line on the centerline of the building roof.

Ladders have been assessed as being suitably safe for short periods of working at height.

Under current CDM regulations, we would advise it is the client's responsibility to provide Elite Systems (GB) Ltd with a pre-construction Health and Safety Plan.

Our estimate has initially been based on the hire for one full working day (8 hours on site.) of the use of a 50 tonnes crane.

Should our offer be acceptable we can arrange for a specific site survey to assess the actual size of crane required.

We will be provided with good clear firm access to the site, free from subsidence and settling.

We assume for the inclusion of foundations that the existing site has a ground loading pressure in excess of 100kn.

Acceptance of our quotation implies that the purchaser is in acceptance of Elite Systems (GB) Ltd. terms and conditions which are available on request.

Delivery approximately 6 weeks, subject to confirmation at time of ordering.

We trust that the above is satisfactory, and hopefully look forward to receiving your values order in due course.

Assuring you of our closest attention at all times.

Yours faithfully,

Jason Bowker  
Commercial Manager

**Elite Systems (GB) Ltd. terms of trading**

Seller refers to Elite Systems (GB) Ltd.

1. General. In the event of no contract being entered into by the buyer and seller. These conditions with such special conditions as are endorsed upon the face hereof are the only conditions upon which the Seller is prepared to deal with the Buyer and they solely govern any contract arising out of the sellers quotation and order acknowledgement to the exclusion of any other expressed or implied conditions.

2. Price. All prices are quoted exclusive of Value Added Tax and are subject to Value Added tax at the appropriate rate where applicable.

3. Payment. (a) Supply of Buildings/Goods. Payment of 70% of gross order value will be made by the Buyer upon delivery to site of the Buildings / Goods. The site is deemed to be the intended place of occupation as given by the Buyer. (In the case of the building being placed into storage due to delays on site due to circumstances beyond control of the Seller, the payment will still be applicable.) The remaining 30% payment will be made no later than the last day of the month following the month in which the Buildings/Goods achieved practical completion or occupation by the Buyer.

(b) Supply of Services/Erection shall be quoted and included in the above valuation and payment will be made by the Buyer no later than as stated above.(c) All payments will be made by the Buyer to the Seller in full without any deduction, retention, discount or set off unless otherwise agreed in writing by the Seller.

4. Delivery. (a) Unless otherwise expressly agreed in writing any delivery or completion times indicated by the Seller in its quotation or otherwise are business estimates only and the Seller will not be liable to the Buyer for any loss or damage sustained by the buyer as a result of the Sellers failure to comply with such delivery or completion times.

(b) If for any reason beyond the Sellers control the Buyer is unable to accept delivery at the specified date the Seller shall be entitled to submit a claim for payments as if the delivery had taken place. The Seller will also be entitled to be paid for the amount for any additional loss and expense arising from the delay.

(c) The Seller shall be entitled to delay, suspend or cancel deliveries if the Buyer becomes bankrupt or makes any agreement or composition with his creditors or goes into liquidation (otherwise than voluntary for reconstruction or amalgamation purposes) or if a receiver is appointed These rights may be exercised by the Seller if the Seller has reasonable grounds to believe that any such events is likely to occur.



5. Risk. (a) In the event that the goods are to be delivered by the Seller to a place nominated by the Buyer, the risk therein shall pass to the Buyer when the goods are tendered for delivery at that place.

(b) In the event that the goods are to be collected by the Buyer from the Seller's works, the risk shall pass to the Buyer when they are loaded onto the Buyer's vehicle or onto a vehicle of the Buyer's carrier or other agent or at such time as they are available for loading onto that vehicle and would have been loaded onto it had the Buyer duly collected them.

6. Title. Until all sums due under the contract have been received by the Seller:

(a) All the goods shall remain the property of the Seller who shall be entitled to re-possess all or any of the goods if at any time the Buyer has defaulted in any payment or if in the reasonable opinion of the Seller the credit standing of the Buyer has been impaired, and the Seller may enter into any of the land of the Buyer or such land where the goods are placed for the purpose of so re-possessing the goods.

(b) In the event that the Buyer sells the goods to a third party (a) above will still apply.

(c) Any proceeds from and arising out of the disposal or other use of the goods by the Buyer shall be held on trust absolutely.

7. Warranty. (a) Where goods supplied by the Seller incorporate components or materials manufactured by other suppliers the Seller will give no warranty in respect of such components or materials and shall be under no liability in respect thereof (save pursuant to sub-clause (b) hereof).

(b) The Seller undertakes that insofar as the goods are not his own manufacture he will use his best endeavors to secure from his suppliers in respect of any defect in workmanship or materials notified to him within three months of delivery of the goods and will pass on to the Buyer the benefits of any guarantees or indemnities given to him in respect thereof by his suppliers.

(c) The Seller shall rectify any such defect that is not as the Seller's quotation or specification, given written notification within 7 days of completion of the building on site.

(d) The Seller's liability shall be limited to the goods supplied and will not include any consequential loss or damage as a result of failure of the goods supplied or workmanship or incorrectly supplied goods.

(e) Where components are supplied complete ex works for installation by the Buyer the Seller will replace such components Ex works (subject to (c) above) and will not be liable for transportation, or removal and replacement costs.

8. Advice by the Seller. The Seller may if requested be prepared to assist the Buyer in deciding which types of goods may be suited to a

particular applications. However in all such cases the seller gives any such advice and assistance without accepting responsibility or liability therefore and advises the Buyer to ensure that the goods comply with applicable regulations and are fit and suitable for the proposed application.

9. Alterations and Modifications. The Seller may without notice to the Buyer carry out alterations or improvements in design, materials or methods of manufacture/Site assembly from time to time and may substitute other reasonable similar parts for any proprietary or special parts ordered by the Buyer and which the Seller considers to be practicably unprocurable, or unprocurable in sufficient quantities or in sufficient time or procurable with difficulty or at excessive cost.

10. Force Majeure. The Seller shall not be liable for any loss or damage caused by delay in the performance of any of its obligations hereunder where the same is occasioned by any cause whatsoever beyond the Sellers control including, but not limited any act of God; War; civil disturbance; requisitioning; governmental or parliamentary restrictions; prohibitions or enactments of any kind; import or export regulations; strike lockout or trade disputes (whether involving the Sellers employee's or those of any other person) difficulties in obtaining labor or materials; breakdown of machinery; fire; or accident. Should any such event occur the Seller may cancel or suspend this contract without incurring any liability for any loss or damage thereby occasioned.

11. Cancellation. If any contract is cancelled by the Buyer, the Seller will be entitled to be paid for, (a) All the goods supplied and for expenditure incurred up to the date of receipt of the written notice of the cancellation, together with loss of anticipated profit on the contract.

12. Governing law. The contract shall be construed in accordance with and governed by the Law of England, which shall be the law of the contract.

13. Errors and Omissions. The Seller reserves the right to amend any error or omission in its quotation.

# **CONTRACTOR'S PROPOSALS**

## **1. INTRODUCTION**

### **DESCRIPTION OF THE DEVELOPMENT**

The proposed development will consist of a single storey prefabricated modular building.

The external leaf of the building is Plastic coated steel (from the Corus Colorcoat LG range). Steel painted security main entrance doors and UPVC double glazed windows with top hung opening lights. The roof is a flat roof with a Firestone Roof Waterproofing System.

The buildings will be constructed of a steel frame, including a steel / timber frame floor and roof.

The building will have a floor to ceiling height of 2.40 metres two activity rooms and four stores. The buildings will be complete with all mechanical and electrical installations as described in the detailed Specification section of this document. The building will have a steel floor to allow the building to be sunk into the ground to give level access.

No external works have been allowed for within our proposed offer.

## **2. DESIGN CRITERIA / MATERIALS AND WORKMANSHIP**

The works will be constructed in accordance with the relevant approved design drawings and specifications which will be prepared by Elite Systems design Dept, Structural Engineers and Acoustic Consultant employed by ourselves as part of the Design and Build Contract. Included in this offer are all the fees that become due to the aforementioned Consultants.

We shall obtain Building Regulation Approval.

The works will be as a minimum, designed and constructed and use materials in compliance with and conformity to the following:

- The requirements of the Local Planning Authority in so far as possible.
- The requirements, as are current at the date of submission for the Building Notice of the Building Regulations, as they relate to the works.
- The requirements of the Local Authority and of competent organisations reporting to the Local Authority, including the Fire Officer requirements.
- The published relevant sections of British Standards Specifications and Codes of Practice.
- Any relevant Acts, Statutory Instruments and Mandatory Guidelines as they relate to the works.
- Building Regulations requirements for proper disabled access, escape and internal access arrangements.
- The Disability Discrimination Act 2005.
- The Construction (Design and Management) Regulations 2015.
- Relevant sections of the Health and Safety at Work Act.
- The current edition of the IEE Wiring Regulations with any amendments.

- Relevant Codes of Practice, British Standards and European Harmonisation Documentation.
- CIBSE Guides and Technical Memoranda.
- Equipment manufacturer's installation guidance and recommendations.

### 3. CONSTRUCTION (DESIGN AND MANAGEMENT) REGULATIONS 2015

We are aware of the requirements of the Construction (Design and Management) Regulations 2015 and are willing to accept the role of Principal Contractor defined there under, our offer includes for all costs arising in respect of the Principal Contractor's duties. We accept that as "Principal Contractor" we will be required to comply with all the requirements that this position places upon us. Equally, we are aware that we will be responsible for ensuring that all subcontractors who for the purpose of these Regulations will be deemed to be "Contractors", comply with these obligations under the Regulations.

### 4. UNACCEPTABLE MATERIALS / PROHIBITED MATERIALS

Any material which by their nature or application do not conform with British Standards or Codes of Practice or any European Union equivalent, current at the date of use. And any materials generally known within the contractor's trade to be deleterious in the particular circumstances in which they are used, or specified for use, to health and safety and / or the durability of the works, again at the time of use.



## **SPECIFICATION**

### **GROUND PREPERATION**

These works are to be carried out by others, not included within our proposed offer.

### **FOUNDATIONS**

These works will be carried out by others, not included within our proposed offer. Elite Systems will issue a foundation layout drawing for these works.

### **STRUCTURAL DESIGN**

All structural design will be carried out in accordance with the appropriate Code of Practice or British Standard, the principles of which are: -

- a) B.S.6399: Part 2:1997 – Wind Loads.
- b) B.S.6399: Part 1:1996 – Design Loads.
- c) B.S.5950: Part 5: 1998 – Cold Rolled Elements.
- d) B.S.5950: Part 1: 2000 – Structural Steelwork.
- e) B.S.8110: Part 1: 1997 – Structural Concrete.

### **Design Superimposed Loads**

- |            |               |
|------------|---------------|
| a) Floors. | 3.00 kN/m sq. |
| b) Roof    | 0.75 kN/m sq. |

### **U-Values**

Roof	0.15	W/m <sup>2</sup> K
Walls	0.26	W/m <sup>2</sup> K
Floor	0.2	W/m <sup>2</sup> K
Windows	1.4	W/m <sup>2</sup> K
Doors	2.1	W/m <sup>2</sup> K

## **GENERAL SUPERSTRUCTURE**

The superstructure will be a single storey steel portal frame. The roof will be finished with a PVC membrane.

## **EXTERNAL WALLS**

The external walls will be plastic coated steel from the Corus Colorcoat LG Range, laminated onto BM Trada certified 9mm plywood. The internal lining will be foil backed Lafarge Megadecorated plasterboard. Pre finished in paper backed vinyl from the Outlook Tektura range. The linings are fixed to timber studs. Insulation between the studs to meet the U-value requirements in the current Building Regulations.

## **ROOF**

The roof will be pitched at 1 degrees comprising of a Firestone rubbercover EPDM single layer roof waterproofing membrane system on 11mm roof decking. Insulated to meet the U-value requirements in the current Building Regulations.

The eaves and verge fascia will be LG plastic coated steel laminated to 9.5mm WBP plywood.

## RAINWATER GOODS

Black polypipe black plastic square profile. With all necessary brackets, fittings, drain adapters etc. Downpipes are square black plastic. All items to be fixed in accordance with the manufacturer's instructions.

## EXTERNAL WINDOWS, DOORS, CANOPIES

Windows to be UPVC framed double glazed units, Secure by Design and colour white. The double-glazed units will be 4mm inner and outer leafs, with outer leaf laminated. Glazed units are manufactured to BS 5713. All windows and glazed units, doors, etc. to give a minimum U- value to meet current Building Regulations.

Windows to be complete with lockable handles, flashings, sills, seals etc. and trickle vents.

Opening windows to ground floor will be outward opening on friction stays. All opening handles will be white powder coated finish. Water tightness, air permeability and wind resistance will meet the requirements of BS 6375. All windows will be fully weather stripped and tested and provide background ventilation through head mounted trickle vents as required by current Building Regulations.

All glazing in critical locations, i.e. between finished floor level and 800mm above this level, within doors will be toughened glass.

External doors will be painted steel security doors from Metador.

## INTERNAL WALLS

Timber studwork to form compartment walls with one-hour fire resistance as required by the current Building Regulations. All vertical and horizontal perimeter junctions of compartment walls to be sealed with intumescent mastic where applicable.

Timber studwork to form internal partitions.

All partitions to receive 15mm impact resistant Megadecorated plasterboard, prefinished with paper backed vinyl from the Outlook Tektura range. All structural and acoustic walls will be taken up from the structural floor to the underside of the structural roof.

Internal walls to have acoustic insulation between studs to achieve the required noise reduction value where applicable.

## CEILINGS

Proprietary metal suspension system within the open area and entrance area supporting OWA Constellation 3, 600 x 600mm mineral fibre ceiling tiles with a square edge detail, colour white, in 24mm exposed metal tee. Class O surface spread of flame. Timber shadow battens in matt black finish and angle trim in white to be fixed to the perimeter throughout.

Ceiling to toilets to achieve 1 hour fire rating, comprising one layer of 15mm impact resistant Megadecorated. With an emulsion paint finish in white.

## INTERNAL DOORS

All internal doors will be solid core Ash veneered with softwood frames and architraves. The ironmongery will be S.S. finish and will be fitted appropriate to the designation of the door. Door closers will be fitted where required to toilets and fire escape route doors. The fire rating of all the doors will be in accordance with current legislation and to the satisfaction of Building Control.

Glazed panels will be incorporated in those doors where it is required to meet Building Regulations. Doors generally will be 726mm, 826mm and 926mm wide as appropriate x 2040mm high.

Final exit doors will be fitted with panic release devices and open outwards onto a level landing. Half hour fire resisting doors will be fitted with intumescent sealing strips and door closers.

## INTERNAL FINISHES

### CLASSROOMS.

#### Floor

Heckmondwike Supacord heavy duty contract carpet.

#### Ceiling

2400mm above finished floor level.

OWA Constellation 3, 600mm x 600mm mineral fibre ceiling tiles with square edge detail, colour; white. In 24mm exposed metal tee grid system.

50 x 25mm softwood shadow batten to perimeter - exposed face to be black. With white metal angle trim.

#### Walls

Dry lined with 15mm impact resistant Megadecorated plasterboard pre finished with paper backed vinyl from the Outlook Tektura range.

#### Joinery

Door frames and architraves to be softwood and receive 1 coat primer, 2 coats undercoat, 1 coat gloss. Colour; white.

Window surrounds in Birch veneer with two coats clear matt varnish finish.

#### Doors

Ash veneered solid core doors.

Vision panels where required.

All ironmongery to be SS finish.



## LOBBY / CORRIDOR

### Floor

Tarkett Safetred Universal Plus-R11, with mastic sealant to perimeter of softwood skirting.

Heckmondwike Battleship / Hippo barrier matting to entrance.

### Ceiling

2400mm above finished floor level.

OWA Constellation 3, 600mm x 600mm mineral fibre ceiling tiles with square edge detail, colour; white. In 24mm exposed metal tee grid system.

50 x 25mm softwood shadow batten to perimeter - exposed face to be black. With white metal angle trim.

15mm impact resistant Megadecorated plasterboard, to receive 2 coats emulsion paint to perimeter.

### Walls

Dry lined with 15mm impact resistant Megadecorated plasterboard pre finished with paper backed vinyl from the Outlook Tektura range.

### Doors

Ash veneered solid core doors.

Vision panels where required.

All ironmongery to be SS finish.

### Joinery

Door frames and architraves to be softwood and receive 1 coat primer, 2 coats undercoat, 1 coat gloss. Colour; white.

## ACTIVITY ROOM

### Floor

Heckmondwike Supacord heavy duty contract carpet.

### Ceiling

2400mm above finished floor level.

OWA Constellation 3, 600mm x 600mm mineral fibre ceiling tiles with square edge detail, colour; white. In 24mm exposed metal tee grid system.

50 x 25mm softwood shadow batten to perimeter - exposed face to be black. With white metal angle trim.

### Walls

Dry lined with 15mm impact resistant Megadecorated plasterboard pre finished with paper backed vinyl from the Outlook Tektura range.

Top hung sliding folding partition with a laminate finish. With a sound attenuation of Rw46dB.

### Doors

Ash veneered solid core doors.

Vision panels where required.

All ironmongery to be SS finish.

### Joinery

Door frames and architraves to be softwood and receive 1 coat primer, 2 coats undercoat, 1 coat gloss. Colour; white.

Window surrounds in Birch veneer with two coats clear matt varnish finish.

## STORES

### Floor

Tarkett Safetred Universal Plus-R11, with mastic sealant to perimeter of softwood skirting.

### Ceiling

2400mm above finished floor level.

OWA Constellation 3, 600mm x 600mm mineral fibre ceiling tiles with square edge detail, colour; white. In 24mm exposed metal tee grid system.

50 x 25mm softwood shadow batten to perimeter - exposed face to be black. With white metal angle trim.

### Walls

Dry lined with 15mm impact resistant Megadecorated plasterboard pre finished with paper backed vinyl from the Outlook Tektura range.

### Doors

Ash veneered solid core doors.

Vision panels where required.

All ironmongery to be SS finish.

### Joinery

Door frames and architraves to be softwood and receive 1 coat primer, 2 coats undercoat, 1 coat gloss. Colour; white.

## ELECTRICAL WORKS

48no TamLite PLG 600mm x 600mm Recessed LED Lighting Panel c/w HFD, 12no per Classroom including 2no emergency version per classroom

11no Tam-lite PLG 600mm x 600mm Recessed LED Standard Panel to corridor and activity Rooms including 5no emergency version

4no Tam-lite euro LED to Storerooms, all are emergency version

2no LED Emergency Exit Box to Escape Route Doors

2no LED External Emergency Bulkhead Light to External Doors

1no LED External light c/w Photocell and Timeclock Control

8no Daylight Dimming Control to Classroom Lights, 2 per classroom

6no PIR Control to Storerooms and activity rooms

15no Supplies to Fixed Equipment, 4no A/C, 4no Panel Heater, 1no Fire Alarm, 1no Intruder Alarm, 1no Data System, 4no tubular heater, intruder alarm,

1no 3-Phase Mains Distribution

42mtrs Dado Trunking c/w Accessories, 9mtrs per classroom, 3mtrs per activity room

44no Socket Outlets, 9no per Classroom, 3no to activity Rooms and 2no to corridor

4no Panel heaters, 2no to corridor, 1no per activity room c/w thermostat control

1no First Fix only to 18no Fire Alarm points for completion by schools nominated contractor

4no Daikin Ceiling Mount 7.1KW A/C Cassette to Classrooms

4no A/C Materials

4no A/C Installation

4no External A/C Condenser Cage

Testing and Commissioning to BS 7671

## INCOMING SERVICES

The following services shall be made available in an agreed location within the proposed building footprint.

- Electricity
- Water

Electricity & water.

No allowance has been made for supplying a new supply.

## EXTERNAL WORKS

These works will be carried out by others, not included within our proposed offer.

## DRAINAGE

### Surface Water Drainage

The surface water drainage from the roof will be collected into vertical stacks. The underground surface water drainage scheme will be supplied by others, outside of our proposed offer.

### Foul Drainage

Main sanitary soil stacks will be provided in risers which will accept all the waste from the toilets.

The soil stacks will be connected to underground drains which will be supplied by others, outside of our proposed offer.



## QUALIFICATIONS

- *In the event of a discrepancy between the Employers Requirements and Elite Systems Contractors Proposals, Elite Systems C.P.'s will take precedent.*
- *Elite Systems will issue construction status drawings for approval from the client. The drawings must be signed off by the client 5 days from the issue date. In the absence of a signature after the 5<sup>th</sup> day, Elite Systems will proceed with the works. Any alterations required after this time will be subject to costs.*
- *Elite Systems will issue a valuation upon the buildings installation on site. A final valuation will be issued upon the completion of the project. Intermediate valuations will be issued if the project on site period exceeds 28 days. The valuation approval period is 5 working days, if after that period Elite Systems have not received notification, an invoice will be issued by Elite Systems. All invoices are payable after 28 days.*
- Services – We have assumed that there is sufficient capacity within the sites infrastructure to accommodate the proposed building.
- The appointment of the utility suppliers and the installation of any meters that may be required will be the responsibility of the client.
- The building quoted is external dimensions.
- Full building manuals are included.
- Elite Systems reserve the right to review the programme and completion date of the contract if any onerous Planning Conditions are served by the local Planning Authority.
- Whilst Elite Systems modular building will achieve a BREEAM 'Pass' rating, for the contract to achieve a 'Pass' specific site issues have to be addressed, which have not been included in our quotation.

## EXCLUSIONS

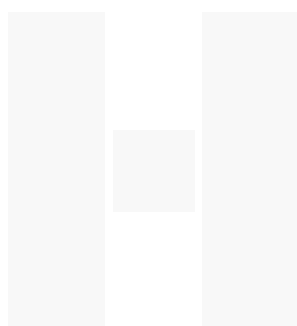
- Drainage surveys
- Surface water drainage attenuation.
- Firefighting equipment.

- I.T.Installations.
- Telephone installations.
- Intruder alarm installation.
- Planning Application.
- Cost for CDMC.
- Road closures.
- Fixed furniture.
- Loose furniture.
- White boards, interactive whiteboards, projectors.
- Linking the proposed addressable analogue fire alarm to the sites existing system.

---

## MATERIAL SPECIFICATIONS.

## Heavy Contract Carpet and Tiles

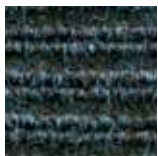


**Heckmondwike**  
Quality in every fibre

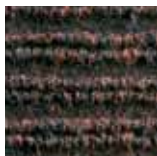




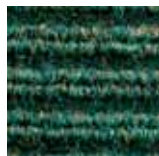
**BH**  
Battleship/Hippo  
Entrance Area



Blue



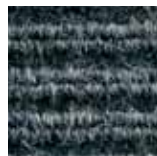
Brown



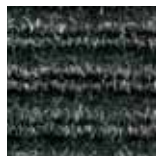
Lincoln Green



Pale Olive



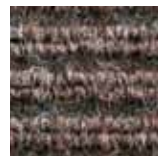
Slate



Anthracite



Ash Grey



Heath



# Heckmondwike Battleship/Hippo

Entrance Area

Popular Battleship/Hippo is a dedicated entrance area carpet which is used extensively in education and public sector buildings as it has been designed to clean shoes and is ideal as an interceptor. Hippo comes with a rubber waffle backing and can be loose laid in small areas or footwells.



Fiesta



Gingerbread



Moorland



Pebble

Specification	Battleship/Hippo
Fibre Construction	100% Polypropylene
Colour Fastness	Light (BS EN ISO 105:B02) 6 Wet Rubbing (BS EN ISO 105:B01) 4-5 Dry Rubbing (BS EN ISO 105:X12) 4-5
Flammability	BS6307 Methanamine Pill Test - Pass
Formats	Sheet 
Backing	Rubber Waffle (Hippo)
Size	2 metre and 4 metre. Ribbing runs down length of roll
Weight	1495gm metre <sup>2</sup> (Battleship) 2379gm metre <sup>2</sup> (Hippo)
Thickness	10.50mm (Battleship) 12mm (Hippo)



BESA



Manufactured in the UK

E & OE

Heckmondwike FB reserves the right to change or modify product specifications without giving prior notice. Colours are limited to the print process and may differ slightly to the actual product.

05/2012



Heckmondwike FB, A division of  
National Floorcoverings Ltd.  
Wellington Mills, Liversedge,  
West Yorkshire WF15 7FH

**Sales:** 01924 406161 - Admin: 01924 410544

**Free Fax:** 0800 136769

**sales@heckmondwike-fb.co.uk**

**www.heckmondwike-fb.co.uk**

# BATTLESHP/HIPPO

Quality in every fibre

## Specification

PRODUCT	Battleship/Hippo Heavy Contract Carpet Hippo supplied with rubber waffle backing
FIBRE CONSTRUCTION	100% Polypropylene
WEIGHT	1495gm metre <sup>2</sup> (Battleship), 2379gm metre <sup>2</sup> (Hippo)
THICKNESS	10.50mm (Battleship), 12mm (Hippo)
ROLL WIDTH	 2 metre and 4 metre. Ribbing runs down length of roll
COLOUR FASTNESS	Light (BS EN ISO 105:B02) 6 Wet Rubbing (BS EN ISO 105:B01) 4-5 Dry Rubbing (BS EN ISO 105:X12) 4-5
FLAMMABILITY	(BS6307) Methanamine Pill Test - Pass

## INSTALLATION



Recommended carpet layout

## ADHESIVE GUIDE

Battleship/Hippo carpet should be fully adhered with F Balls F3 or Laybond L47CV. Hippo carpet should be fully adhered with F3 or loose laid in matwells. For details of subfloor preparation and a full guide to installation visit: [www.heckmondwike-fb.co.uk](http://www.heckmondwike-fb.co.uk)

## MAINTENANCE

To achieve maximum life expectancy it is essential to initiate a maintenance schedule from the date of installation. A full guide to cleaning & maintenance is available at: [www.heckmondwike-fb.co.uk](http://www.heckmondwike-fb.co.uk)



FM00644



Certificate No. EMS 73345



Manufactured in the UK

PLEASE NOTE: For technical reasons, as with all textile materials, it is not possible to colour match from different batches. Orders that need to colour match should be placed at the same time. Production may therefore show variations to the sample card. Heckmondwike FB reserves the right to change or modify product specifications without giving prior notice.

**Heckmondwike**  
Quality in every fibre

Heckmondwike FB, A division of  
National Floorcoverings Ltd.  
Wellington Mills, Liversedge,  
West Yorkshire WF15 7FH

**Sales:** 01924 406161 - Admin: 01924 410544

**Free Fax:** 0800 136769

**sales@heckmondwike-fb.co.uk**

**www.heckmondwike-fb.co.uk**






**Supacord**

Fibre Bonded

# SUPACORD

Quality in every fibre

## Specification

PRODUCT	Supacord Heavy Contract Carpet and Tiles
FIBRE CONSTRUCTION	80% Polypropylene, 20% Polyamide
WEIGHT	1020gm metre <sup>2</sup> (Sheet), 4020gm metre <sup>2</sup> (Tile)
THICKNESS	6.20mm (Sheet), 7.60mm (Tile)
ROLL WIDTH	 2 metre and 4 metre. Ribbing runs down length of roll
TILE SIZE	 50cm x 50cm (Tiles are Bitumen backed)
COLOUR FASTNESS	Light (BS EN ISO 105:B02) 6 Wet Rubbing (BS EN ISO 105:B01) 4-5 Dry Rubbing (BS EN ISO 105:X12) 4-5
FLAMMABILITY	(BS5287) Assessment and labelling of Textile Floorcoverings tested to BS4790 (Hot Metal Nut Test) - Low Radius of Char BS EN 13501:2002 Euroclass C <sub>fl</sub> -s1 (Sheet) Euroclass B <sub>fl</sub> -s1 (Tile)
REDUCTION IN IMPACT NOISE	BS EN ISO 140-8:19dB
ANTISTATIC	Suitable for use in computer rooms
INSTALLATION	 Before laying Supacord tiles should be allowed to condition for 24 hours at the expected temperature and humidity levels. Supacord tiles should be laid rotationally, alternating the direction of the tiles through 90°
ADHESIVE GUIDE	Sheet carpet should be fully adhered with F Balls F3 or F52 or Laybond L47CV or 48X. Sheet carpets can be laid into F40 as a release system. For tiles use Tackifier F41 or Laybond 79. For details of subfloor preparation and a full guide to installation visit: <a href="http://www.heckmondwike-fb.co.uk">www.heckmondwike-fb.co.uk</a>
MAINTENANCE	To achieve maximum life expectancy it is essential to initiate a maintenance schedule from the date of installation. A full guide to cleaning & maintenance is available at: <a href="http://www.heckmondwike-fb.co.uk">www.heckmondwike-fb.co.uk</a>

Sheet  
**A+**  
BREEAM Rating  
Certificate 363

Tile  
**A**  
BREEAM Rating  
Certificate 363

**CE**  
EN 14041  
Heckmondwike FB  
Liversedge  
WF15 7FH  
09  
Supacord Sheet  
Fibre Bonded Sheet  
Floorcovering  
intended for  
internal use

**CE**  
EN 14041  
Heckmondwike FB  
Liversedge  
WF15 7FH  
09  
Supacord Tile  
Fibre Bonded Tile Floor-  
covering  
intended for  
internal use



FM00644



Certificate No. EMS 73345



Certificate No. ENP363

**BESA****Manufactured in the UK**

PLEASE NOTE: For technical reasons, as with all textile materials, it is not possible to colour match from different batches. Orders that need to colour match should be placed at the same time. Production may therefore show variations to the sample card. Heckmondwike FB reserves the right to change or modify product specifications without giving prior notice.

**Heckmondwike**  
Quality in every fibre

Heckmondwike FB, A division of  
National Floorcoverings Ltd.  
Wellington Mills, Liversedge,  
West Yorkshire WF15 7FH

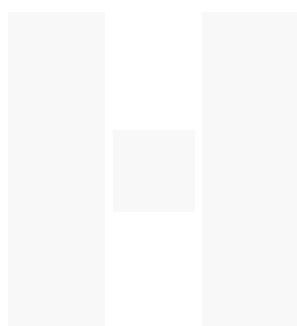
**Sales:** 01924 406161 - Admin: 01924 410544

**Free Fax:** 0800 136769

**sales@heckmondwike-fb.co.uk**

**www.heckmondwike-fb.co.uk**

## Heavy Contract Carpet and Tiles



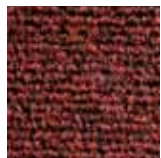
**Heckmondwike**  
Quality in every fibre



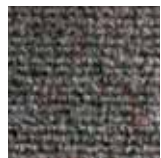
Graphite



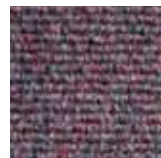
Flint



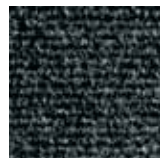
Claret



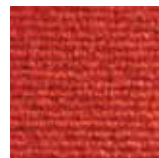
Seal



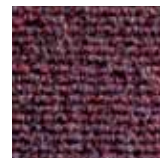
Lavender



Anthracite



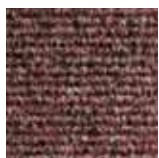
Red



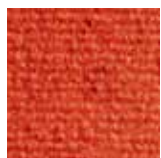
Mulberry



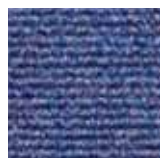
Kingston Grey



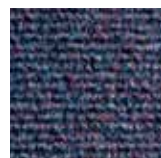
Moorland



Orange



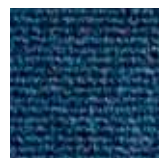
Amethyst



Blueberry



Azure



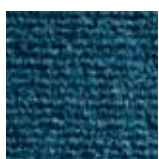
Indigo



Cobalt



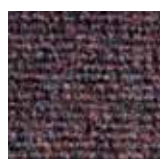
Violet



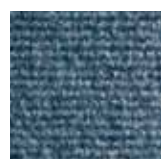
Pacific Blue



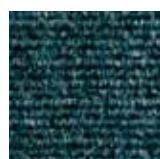
Kingfisher



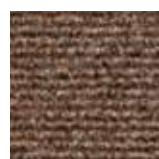
Damson



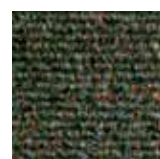
Astra Blue



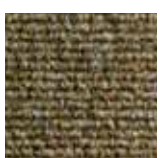
Moonlight



Acorn



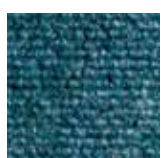
Gunmetal



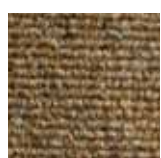
Safari



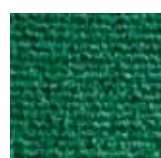
Pale Olive



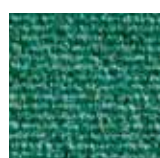
Arctic Blue



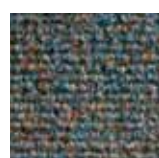
Pebble



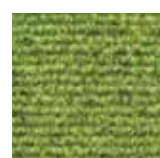
Green



Emerald



Opal



Willow



# Heckmondwike Supacord

Fibre Bonded

Popular Supacord is widely specified for many education buildings across the UK. In addition to the education sector, Supacord can be found in retail outlets, office environments and public sector buildings. Supacord is highly cost competitive and is the perfect choice for areas of heavy wear and tear.



Steel Grey



Magenta



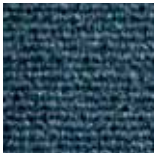
Heather



Purple



Blue



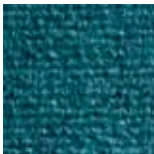
Blue Moon



Onyx





Sherwood



Aquamarine



Yellow

Specification	Supacord	
Fibre Construction (Sheet)	80% Polypropylene, 20% Polyamide	
Fibre Construction (Tile)	80% Polypropylene, 20% Polyamide	
Colour Fastness	Light (BS EN ISO 105:B02) 6 Wet Rubbing (BS EN ISO 105:B01) 4-5 Dry Rubbing (BS EN ISO 105:X12) 4-5	
Flammability	BS5287 Assessment and labelling of Textile Floorcoverings tested to BS4790 (Hot Metal Nut Test) - Low Radius of Char	
	BS EN 13501:2002 Euroclass C <sub>ff</sub> -s1 (Sheet) Euroclass B <sub>ff</sub> -s1 (Tile)	
Antistatic	Suitable for use in computer rooms	
Formats	Sheet 	Tiles 
Backing	-	Bitumen
Size	2 metre and 4 metre. Ribbing runs down length of roll	50cm x 50cm
Weight	1020gm metre <sup>2</sup>	4020gm metre <sup>2</sup>
Thickness	6.20mm	7.60mm
BREEAM Rating	A+ (Certificate 363 for office, schools & retail)	A (Certificate 363 for office, schools & retail)



BESA



Manufactured in the UK

E & OE

Heckmondwike FB reserves the right to change or modify product specifications without giving prior notice. Colours are limited to the print process and may differ slightly to the actual product.

05/2012



Heckmondwike FB, A division of  
National Floorcoverings Ltd.  
Wellington Mills, Liversedge,  
West Yorkshire WF15 7FH

**Sales:** 01924 406161 - Admin: 01924 410544

**Free Fax:** 0800 136769

**sales@heckmondwike-fb.co.uk**

**www.heckmondwike-fb.co.uk**

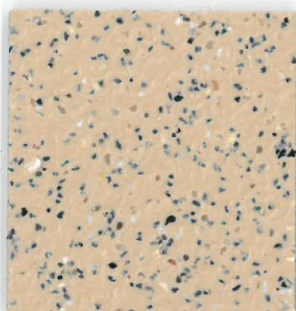


## Available in sheet and tile

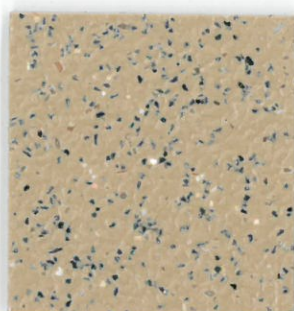
- Sustainable slip resistance throughout the product life
- Safety Clean XP PUR reinforced surface for improved stain resistance and ease of maintenance
- Ultimate flexibility for ease of installation
- Minimum 29% recycled content – helping the environment

VINYL FLOORCOVERING WITH  
ENHANCED SLIP RESISTANCE

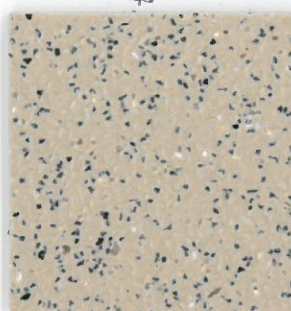
# Safetred Universal



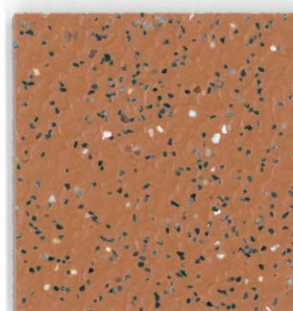
170 Jupiter Beige\*  
[weld rod 1294728] LRV 44.50



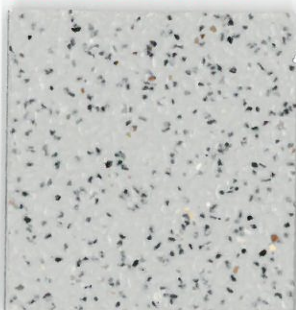
290 Pulsar Brown  
[weld rod 1287005] LRV 34.80



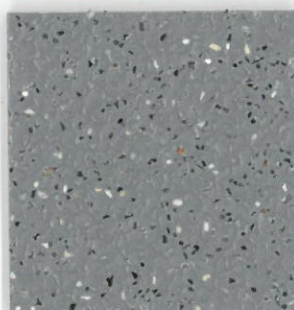
210 Moon Mushroom  
[weld rod 1294083] LRV 38.70



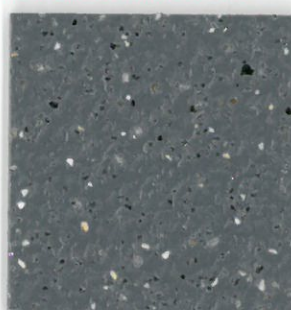
140 Orion Terracotta  
[weld rod 1287199] LRV 23.80



110 Venus light grey\*  
[weld rod 1294680] LRV 45.90



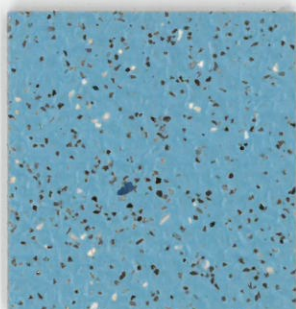
180 Mercury grey\*  
[weld rod 1291216] LRV 24.10



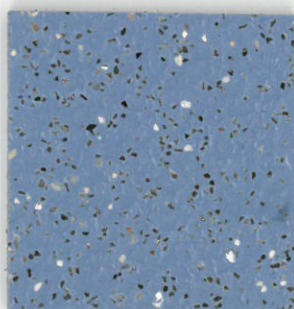
270 Nebula dark grey\*  
[weld rod 1292329] LRV 14.90



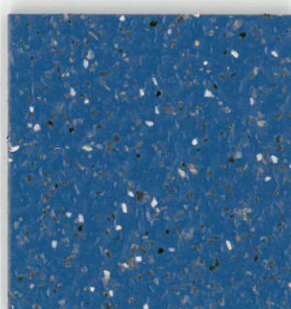
100 Quasar black\*  
[weld rod 1292384] LRV 6.10



310 Triton sky blue  
[weld rod 1287210] LRV 27.30



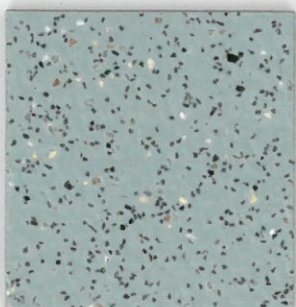
190 Constellation blue\*  
[weld rod 1288344] LRV 23.30



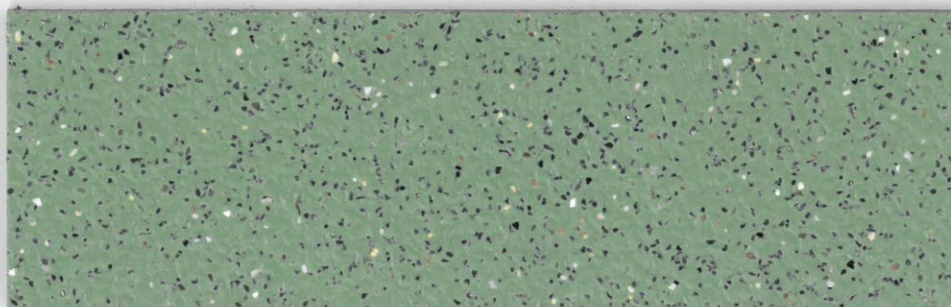
280 Pegasus dark blue\*  
[weld rod 1288329] LRV 13.10



160 Draco red  
[weld rod 1291808] LRV 11.60



240 Comet mint  
[weld rod 1292655] LRV 32.90



300 Neutron green\*  
[weld rod 1287203] LRV 25.20

\* Available in Universal Plus R11, slip resistance for demanding locations





bringing materials to *life*

# GTEC® Megadeco Board

## Technical Data Sheet

### Description

GTEC Megadeco Board is a Dense plasterboard for use in areas of high technical performance. The board is stronger, harder and heavier than Standard plasterboard and has superior fire resistance, sound insulation and impact resistance.

### Appearance

GTEC Megadeco Board is coloured white on the front and grey on the back, and has tapers down the long edges. The board is 12.5mm & 15mm thickness.

### Composition

Aerated Calcium sulphate di-hydrate with fillers and fibres enclosed inside a white pre-sealed paper with bound edges. Core and papers are bonded with starch. Edge glue is PVA.

### Compliance Authority

GTEC Megadeco Board complies with BSEN520 Type D, F, R & I.

### Physical Properties

<b>Strength BS EN:</b>	Breaking load longitudinal: 12.5mm > 725 N Breaking load transverse: 12.5mm > 300 N Breaking load longitudinal: 15mm > 870 N Breaking load transverse: 15mm > 360 N
<b>Fire Performance:</b>	Depends on the system call Technical Enquiryline for advice.
<b>Reaction to fire Surface spread of Flame:</b>	Class 1 to BS 476/7
<b>Fire propagation Index:</b>	< 6.0 i < 3 BS476/6 Class 0 Limited combustibility. Euroclass A2
<b>Moisture Content:</b>	< 2%
<b>Sound Insulation R<sub>w</sub>:</b>	Depends on the system
<b>Mass:</b>	12.5mm = 10.5 to 11.0 Kg/m <sup>2</sup> 15mm = 12.5 to 13.0 Kg/m <sup>2</sup> <i>Note: These boards are 30% heavier compared with Standard plasterboard</i>
<b>Thermal Conductivity:</b>	0.27 W/mK
<b>Thermal Resistance R:</b>	12.5mm = 0.046m <sup>2</sup> K/W 15mm = 0.055m <sup>2</sup> K/W
<b>Mean Water vapour resistance factor (μ):</b>	10 according to EN12524 standard
<b>Nail &amp; screw pull through:</b>	> 700 N
<b>Impact resistance to BS 5234/2 depends on the system, according to appendix B:</b>	12.5mm Heavy duty 15mm Severe duty

## Jointing, Finishing & Painting

GTEC Megadeco Board can be jointed and finished with only GTEC Deco jointing systems. The boards require no primer prior to decorating. The board is not suitable for skim plaster finish.

## Health & Safety

There is no health hazard from Gypsum or paper. The core contains fibreglass rovings, so the users should wear a face mask when cutting the board with an electric powered circular saw which should have a dust extractor fitted.

A 2.4m x 1.2m x 12.5mm board weights 31 kg.

A 2.4m x 1.2m x 15mm board weights 37 kg.

**These boards should be carried by 2 persons**

## Optional: Vapour version of Megadeco Board

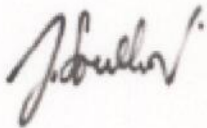
The GTEC Vapour Megadeco Board has the same physical property than the GTEC Megadeco Board but has a silver metallised polyester film back liner which enhances the vapour resistance of the product.

Mean Water vapour resistance factor ( $\mu$ ) of GTEC Vapour Megadeco Board = 900

## Authority

## Date

17 January 2011



**Julien Soulhat**

Technical Manager,  
Lafarge Plasterboard Ltd

## Technical Enquiryline

**TEL: 01275 377789**

**EMAIL: Enquiryline@lafarge-gypsum.lafarge.com**



Certificate No. FM 13594



Certificate No. EMS 75024

Plasterboard, jointing and associated products made in the United Kingdom by Lafarge Plasterboard are manufactured in accordance with management systems certified to BS EN ISO 9001: 2000 (quality) and BS EN ISO 14001: 2004 (environment)



**LAFARGE PLASTERBOARD LTD**  
Marsh Lane, Easton-in-Gordano  
Bristol BS20 0NF  
Tel: 01275 377773  
Fax: 01275 377737

[www.lafargeplasterboard.co.uk](http://www.lafargeplasterboard.co.uk)

**LAFARGE PLASTERBOARD LTD**  
Unit 38, Fonthill Industrial Park,  
Clondalkin, Dublin 22  
Tel: +353 (0) 1626 1603  
Fax: +353 (0) 1626 1679

[www.lafargeplasterboard.co.uk](http://www.lafargeplasterboard.co.uk)







Surface pattern  
**Constellation**  
Constellation 3

## Technical Data

### Material

Mineral wool tiles



**Building material class**

A2-s1,d0 to EN 13501-1

**Thickness**

15 mm and 20 mm nom.

**Colour**

white

**Light reflection**

approx. 88 (ISO 7724-2, ISO 7724-3)

**Sound reduction\***

from 31 dB to 49 dB

**Sound absorption**



$\alpha_w = 0.70$  / NRC = 0.70

**Moisture resistance**



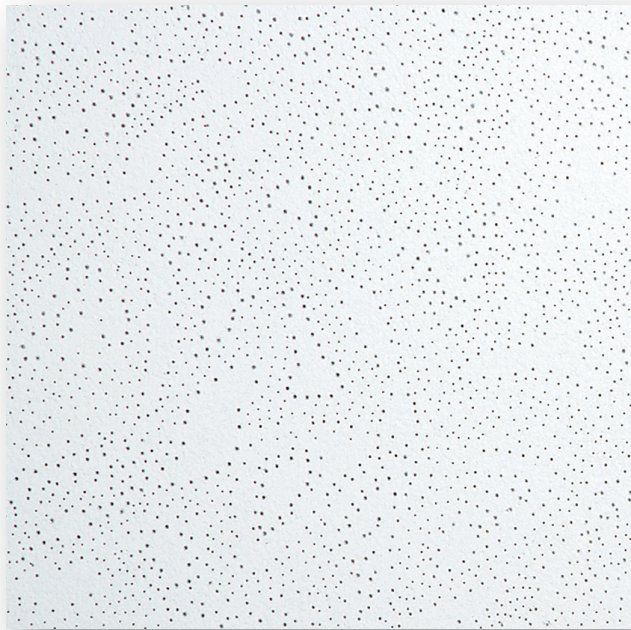
up to 95 % RH

**Fire protection\***

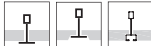



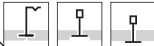


up to F 120 (DIN 4102)  
up to REI 120 (EN 13501-2)

\* Dependent on system, soffit and  
other factors



Constellation 3

Systems																							
Module sizes in mm		 Exposed Systems					 Concealed/Semi-concealed Systems					 Bandraster Systems				 Honeycomb/Baffle Systems			 Clear spanning Systems				
		S <sub>3</sub>	S <sub>3a</sub>	S <sub>3 bws</sub>	S <sub>15</sub>	S <sub>15a</sub>	S <sub>15b</sub>	S <sub>1</sub>	S <sub>9a</sub>	S <sub>9b</sub>	S <sub>2a</sub>	S <sub>2b</sub>	S <sub>2p</sub>	S <sub>18p</sub>	S <sub>18k</sub>	S <sub>18d</sub>	S <sub>8</sub>	S <sub>12</sub>	S <sub>12d</sub>	S <sub>6a/c</sub>	S <sub>6b</sub>		
300 x 300																							
312.5 x 312.5																		•					
300 x 600																							
312.5 x 625																							
600 x 600		•		•		•		•		•								•					
625 x 625			•		•		•		•														
600 x 1200		•		•		•		•										•					
625 x 1250		•	•			•		•										•					
300 x 1200		•	•			•		•		•		•		•	•	•	•	•			•		
300 x 1250										•											•		
300 x 1500														•									
300 x 2000		•		•		•		•						•		•	•				•		
300 x 2500			•			•		•							•						•		
312.5 x 1250		•	•			•		•				•		•	•	•	•	•			•		
312.5 x 1500														•									
312.5 x 2000		•		•		•		•						•		•	•				•		
312.5 x 2500			•			•		•						•		•	•				•		
317.5 x 1250														•									
400 x 1200		•				•				•				•	•	•					•		
400 x 1250		•	•			•		•		•				•	•	•	•				•		
400 x 1500														•									
400 x 2000		•		•		•		•						•		•	•				•		
400 x 2500			•			•		•							•						•		
1200 x 1200																•							
1250 x 1250															•		•						
Height x 1200																		•		•			
Height x 1250																			•				
Height x 1500																				•			

# TECHNICAL SPECIFICATION

## PAPER-BACKED VINYL WALLCOVERING

---

<b>Product</b>	Outlook
<b>Description</b>	Commercial quality, vinyl wallcovering laminated onto a paper backing.
<b>Weight</b>	300 grammes per square metre
<b>Roll Size</b>	130cm x 50m
<b>Fire Rating</b>	Class 0 and 1 to BS476 part 6 and 7.
<b>Adhesive</b>	Tekfix 65
<b>Hanging</b>	Damp paper backing and allow to soak for 10 minutes. Apply adhesive to wall surface. Carefully smooth wallcovering onto wall surface using a spatula, allowing 5-10 cm at top and bottom for trimming. Random pattern match. Overlap lengths and double cut through, using a seam roller to ensure product is well bonded at the join. Remove any adhesive seepage <i>immediately</i> with detergent solution and clean water. Rinse thoroughly. Each alternate length should be reverse hung.
<b>Maintenance</b>	<p>Paper-backed vinyls offer an easy-clean finish for most non oil-based stains, and some resistance to knocks and scrapes. They are best used in 'low traffic' areas. With regular cleaning they will retain their original appearance for 3 - 5 years, depending on area of use.</p> <p>Always carry out a trial in an inconspicuous area first, to ensure cleaning agent suitable. Clean with a mild non-soapy detergent with soft cloth, sponge or soft bristle brush to prevent build up of dirt and staining. Avoid polishes and abrasive cleaning agents as they will cause build up of dirt in the surface texture. Avoid strong active solvent cleaners as they can stain and damage the vinyl surface. Always clean from the skirting level upwards. Rinse thoroughly with clean water. Individual stains should be removed as quickly as possible.</p>
<b>Health &amp; Safety</b>	This product is classified as non-hazardous and therefore does not require any special handling. This product does not require special labelling.
<b>Fire Fighting</b>	Any extinguishing media are suitable. Wear self contained breathing apparatus, protective clothing and full face mask. Fumes should be ventilated immediately due to possible liberation of noxious gases.
<b>Ecological</b>	This product is not bio-degradable. Dispose of in accordance with Local Authority Regulations or via an authorised contractor.

---

TEKTURA  
WALLCOVERINGS

TEKTURA PLC, Suite 1.03 Harbour Island, 34 Harbour Exchange Square, London E14 9GE  
Tel 020 7536 3300 Fax 020 7536 3322



## Firestone Building Products EMEA

Ikaroslaan 75  
Zaventem  
Belgium

Tel: 01606 552026

e-mail: [info@fbpl.com](mailto:info@fbpl.com)

website: [www.firestonebpe.co.uk](http://www.firestonebpe.co.uk)



### Agreement Certificate

89/2216

Product Sheet 2

## FIRESTONE ROOF WATERPROOFING SYSTEMS

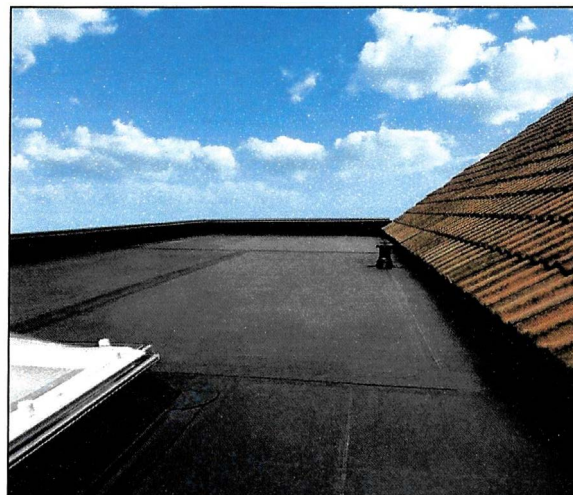
### FIRESTONE RUBBERCOVER EPDM SYSTEM

This Agreement Certificate Product Sheet<sup>(1)</sup> relates to the Firestone RubberCover EPDM System, for use as a single-layer roof waterproofing membrane in fully adhered systems on flat roofs of up to 100 m<sup>2</sup> plan area with limited access in domestic applications.

(1) Hereinafter referred to as 'Certificate'.

#### CERTIFICATION INCLUDES:

- factors relating to compliance with Building Regulations where applicable
- factors relating to additional non-regulatory information where applicable
- independently verified technical specification
- assessment criteria and technical investigations
- design considerations
- installation guidance
- regular surveillance of production
- formal three-yearly review.



#### KEY FACTORS ASSESSED

**Weathertightness** - the system, including joints, when completely sealed and consolidated, will resist the passage of moisture to the interior of the building (see section 6).

**Properties in relation to fire** - the system can enable a roof to be unrestricted under the national Building Regulations (see section 7).

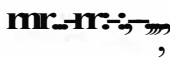
**Resistance to wind uplift** - the system will resist the effects of any wind suction likely to occur in practice (see section 8).

**Resistance to foot traffic** - the system will accept, without damage, the limited foot traffic and loads associated with installation and maintenance (see section 9).

**Durability** - under normal service conditions, the system will provide a durable waterproof covering with a service life of at least 30 years (see section 11).

The BBA has awarded this Certificate to the company named above for the system described herein. This system has been assessed by the BBA as being fit for its intended use provided it is installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agreement



John Albon - Head of Approvals  
Construction Products

( ..e ( / ) " " tu • " ; J ; o , ' , I . a . S ,

Claire Curtis-Thomas  
Chief Executive

Date of Second issue: 27 November 2018

Originally certificated on 22 February 2016

*The BBA is a UKAS accredited certification body - Number 113.*

*The schedule of the current scope of accreditation for product certification is available in pdf format via the UKAS link on the BBA website at [www.bbacerts.co.uk](http://www.bbacerts.co.uk). Readers are advised to check the validity and latest issue number of this Agreement Certificate by either referring to the BBA website or contacting the BBA direct.*

*Any photographs are for illustrative purposes only, do not constitute advice and should not be relied upon.*

#### British Board of Agreement

Bucknalls Lane  
Watford  
Herts WD25 9BA

©2018

Page 1 of 10

tel: 01923 665300  
[clientservices@bbacerts.co.uk](mailto:clientservices@bbacerts.co.uk)  
[www.bbacerts.co.uk](http://www.bbacerts.co.uk)



## Regulations

In the opinion of the BBA, the Firestone RubberCover EPDM System, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements of the following Building Regulations (the presence of a UK map indicates that the subject is related to the Building Regulations in the region or regions of the UK depicted):

# 4

## The Building Regulations 2010 (England and Wales) (as amended)

<b>Requirement:</b>	<b>B4(2)</b>	<b>External fire spread</b>
<b>Comment:</b>	On suitable non-combustible substructures, the use of the system can enable a roof to be unrestricted under this Requirement. See section 7 of this Certificate.	
<b>Requirement:</b>	<b>C2(b)</b>	<b>Resistance to moisture</b>
<b>Comment:</b>	The system, including joints, can enable a roof to satisfy this Requirement. See section 6.1 of this Certificate.	
<b>Regulation:</b>	<b>7</b>	<b>Materials and workmanship</b>
<b>Comment:</b>	The system is acceptable. See section 11 and the <i>Installation</i> part of this Certificate.	



## The Building (Scotland) Regulations 2004 (as amended)

<b>Regulation:</b>	<b>8(1)(2)</b>	<b>Durability, workmanship and fitness of materials</b>
<b>Comment:</b>	The system satisfies the requirements of this Regulation. See sections 10 and 11 and the <i>Installation</i> part of this Certificate.	
<b>Regulation:</b>	<b>9</b>	<b>Building standards applicable to construction</b>
<b>Standard:</b>	<b>2.8</b>	<b>Spread from neighbouring buildings</b>
<b>Comment:</b>	On suitable non-combustible substructures, the use of the system will be unrestricted by the requirements of clause 2.8.111 of this Standard. See section 7 of this Certificate.	
<b>Standard:</b>	<b>3.10</b>	<b>Precipitation</b>
<b>Comment:</b>	The system, including joints, can enable a roof to satisfy the requirements of clauses 3.10.111 and 3.10.711 of this Standard. See section 6.1 of this Certificate.	
<b>Standard:</b>	<b>7.1(a)</b>	<b>Statement of sustainability</b>
<b>Comment:</b>	The system can contribute to meeting the relevant requirements of Regulation 9, Standards 1 to 6 and therefore will contribute to a construction meeting a bronze level of sustainability as defined in this Standard.	
<b>Regulation:</b>	<b>12</b>	<b>Building standards applicable to conversions</b>
<b>Comment:</b>	All comments given for the system under Regulation 9, Standards 1 to 6 also apply to this Regulation, with reference to clause 0.12.111 and Schedule 611.	

- (1) Technical Handbook (Domestic).  
(2) Technical Handbook (Non-Domestic).



## The Building Regulations (Northern Ireland) 2012 (as amended)

<b>Regulation:</b>	<b>23(a)(i)</b>	<b>Fitness of materials and workmanship</b>
<b>Comment:</b>	<b>(iii)(b)(i)</b>	The system is acceptable. See section 11 and the <i>Installation</i> part of this Certificate.
<b>Regulation:</b>	<b>28(b)</b>	<b>Resistance to moisture and weather</b>
<b>Comment:</b>	The system, including joints, can enable a roof to satisfy the requirements of this Regulation. See section 6.1 of this Certificate.	

<b>Regulation:</b>	<b>36(b)</b>	<b>External fire spread</b>
<b>Comment:</b>	On suitable non-combustible substructures, the use of the system can enable a roof to be unrestricted by this Regulation. See section 7 of this Certificate.	

## Construction (Design and Management) Regulations 2015

### Construction (Design and Management) Regulations (Northern Ireland) 2016

Information in this Certificate may assist the client, designer (including Principal Designer) and contractor (including Principal Contractor) to address their obligations under these Regulations.

See sections: 1 *Description* (1.1) and 3 *Delivery and site handling* (3.3) of this Certificate.

## Additional Information

### NHBC Standards 2018

In the opinion of the BBA, the Firestone RubberCover EPDM System, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards*, Chapter 7.1 *Flat roofs and balconies*.

### CE marking

The Certificate holder has taken the responsibility of CE marking the system in accordance with harmonised European Standard BS EN 13956 : 2012. An asterisk(\*) appearing in this Certificate indicates that data shown are given in the manufacturer's Declaration of Performance.

## Technical Specification

### 1 Description

1.1 The Firestone RubberCover EPDM System is a non-reinforced black synthetic ethylene-propylene-diene terpolymer (EPDM) membrane with the nominal characteristics given in Table 1

*Table 1 Nominal characteristics*

Characteristic (unit)	Membrane
	1.1 mm thickness
Roll width (m)	3.05, 4.57, 6.10
Length (m)	7.62
Mass per unit area (kg·m <sup>-2</sup> )	1.35
Tensile strength (N·mm <sup>-2</sup> )	2 7
Elongation (%)	2 300
Tear resistance (N)	2 40
Dimensional stability(%)	50.5
Foldability at low temperature (°C)	≤-45
Resistance to impact (mm)	
Soft substrate	2 1700
Hard substrate	2 200
Resistance to static load (kg) (hard substrate)	2 20

1.2 Other products for use with the system are:

- RubberCover Bonding Adhesive BA 2012 - a roller-applied, solvent-based contact adhesive for bonding the membrane to approved substrates
- RubberCover Water-Based Bonding Adhesive - a water-based adhesive for bonding the membrane to approved substrates
- QuickSeam Cover Strip - a semi-cured EPDM strip, laminated to QuickSeam Tape, to cover and seal butt-jointed membranes

- QuickSeam Corner Flashing - a circular self-adhesive uncured EPDM flashing for use at corners
- QuickSeam SA Flashing - a self-adhesive cured EPDM strip for use as flashing for kerbs, outlets, in gutters and for repairs
- QuickSeam Form Flash 450 mm - a self-adhesive uncured EPDM strip for use as flashing for kerbs, outlets and repairs.

1.3 Ancillary items for use with the system, but outside the scope of this Certificate, include:

- QuickPrime Plus - for cleaning and priming the membrane prior to application of QuickSeam products
- QuickSeam Pipe Flashing - a pre-fabricated pipe boot for flashing circular roof penetrations.

## 2 Manufacture

2.1 The Firestone RubberCover EPDM membrane is manufactured by blending EPDM, process oils, fillers and other additives. The sheets are produced by calendaring or extruding and vulcanising.

2.2 As part of the assessment and ongoing surveillance of product quality, the BBA has:

- agreed with the manufacturer the quality control procedures and product testing to be undertaken
- assessed and agreed the quality control operated over batches of incoming materials
- monitored the production process and verified that it is in accordance with the documented process
- evaluated the process for management of nonconformities
- checked that equipment has been properly tested and calibrated
- undertaken to carry out the above measures on a regular basis through a surveillance process, to verify that the specifications and quality control operated by the manufacturer are being maintained.

2.3 The management system of Firestone Building Products EMEA has been assessed and registered as meeting the requirements of BS EN ISO 9001: 2008 by BSI (Certificate RM 32845).

## 3 Delivery and site handling

3.1 The membranes are delivered to site in rolls, each wrapped in a polythene sleeve bearing the product name, thickness, manufacturer's name and the BBA logo incorporating the number of this Certificate.

3.2 Firestone QuickSeam products should be stored in a clean, dry location and at temperatures between 15 and 25 °C. QuickSeam Corner Flashings and Quickseam Cover Strips cure gradually and should not be stored for more than twelve months. As curing occurs the product becomes less flexible; this does not affect its waterproofing characteristics but it does become more difficult to form details.

3.3 The Certificate holder has taken the responsibility of classifying and labelling the system components under the *CLP Regulation (EC) No 1272/2008 on the classification, labelling and packaging of substances and mixtures*. Users must refer to the relevant Safety Data Sheet(s).

3.4 RubberCover Bonding Adhesive BA 2012 and RubberCover Water-based Bonding Adhesive should be stored between 15 and 25 °C. RubberCover Water-Based Bonding Adhesive should not be allowed to freeze.

*Table 2 Product shelf-life*

Product	Shelf-life (months)
RubberCover Water Based Bonding Adhesive	12
RubberCover Bonding Adhesive BA-2012	12
QuickPrime Plus	12
QuickSeam Pipe Flashing	12
QuickSeam SA Flashing	12
QuickSeam Cover Strip	12
QuickSeam Corner Flashing	12
QuickSeam FormFlash 450 mm	12

## Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on the Firestone RubberCover EPDM System.

### Design Considerations

#### 4 Use

4.1 The Firestone RubberCover EPDM system is satisfactory for use in fully adhered systems on flat roofs with limited access in residential and domestic applications.

4.2 Limited access roofs are defined for the purpose of this Certificate as those subjected only to pedestrian traffic for maintenance of the roof covering and cleaning of gutters, etc. Where traffic in excess of this is envisaged special precautions, such as additional protection to the membrane, must be taken.

4.3 Flat roofs are defined for the purpose of this Certificate as those having a minimum finished fall of 1:80. For design purposes, twice the minimum finished fall should be assumed, unless a detailed analysis of the roof is available, including overall and local deflection, direction of falls, etc.

4.4 Decks to which the system is to be applied must comply with the relevant requirements of BS 6229 : 2003, BS 8217: 2005 and, where appropriate, *NHBC Standards* 2018, Chapter 7.1.

4.5 Insulation systems or materials used in conjunction with the system must be approved by the manufacturer and by Firestone Building Products EMEA and must be either:

- as described in the relevant clauses of BS 8217: 2005, or
- the subject of a current BBA Certificate and be used in accordance with, and within the limitations of, that Certificate.

#### 5 Practicability of installation

The system should only be installed by installers who have been trained by the Certificate holder or the Certificate holder's authorised representatives.

#### 6 Weathertightness

4

6.1 The membrane and joints in the system, when completely sealed and consolidated, will adequately resist the passage of moisture to the inside of the building and so satisfy the requirements of the national Building Regulations.

6.2 The system is impervious to water and when used as described in this Certificate will achieve a weathertight roof capable of accepting minor structural movement without damage.

#### 7 Properties in relation to fire

4

7.1 A system comprising an 18 mm plywood substrate, a 250 µm polyethylene vapour control layer, a mechanically fastened 100 mm glass-faced polyisocyanurate foam insulation board and a layer of RubberCover 1.1 bonded with RubberCover Water-based Bonding Adhesive, achieved a B<sub>Roof(t4)</sub> classification in accordance with BS EN 13501-5 : 2005.

7.2 The membranes, when used in a specification including an inorganic covering listed in the Annex of Commission Decision 2000/553/EC, can be considered unrestricted under the national Building Regulations.

7.3 The designation of other specifications (eg when used on combustible substrates) should be confirmed by:

**England and Wales** - test or assessment in accordance with Approved Document B, Appendix A, Clause A1



**Scotland** - test to confirm Mandatory Standard 2.8, Clause 281111

(1) Technical Handbook (Domestic).

**Northern Ireland** - test or assessment carried out by a UKAS-accredited laboratory or an independent consultant with appropriate experience.

## 8 Resistance to wind uplift


8.1 The adhesion of a fully adhered system to a substrate will normally be limited by the cohesive strength of the substrate. Tests indicate that on substrates with high cohesive strength the adhesion of the membranes is sufficient to resist the effect of wind suction, thermal cycling or minor structural movements occurring in practice.

8.2 Where the membrane is fully adhered to insulation boards, the resistance to wind uplift will be dependent on the cohesive strength of the insulation and the method by which it is secured to the roof deck. This should be taken into account when the insulation material is selected.


## 9 Resistance to foot traffic

The system can withstand, without damage, the limited foot traffic and light concentrated loads associated with installation and maintenance operations. Where traffic in excess of this is envisaged, eg a balcony or roof terrace, then appropriate protection must be considered and the advice of the Certificate holder should be sought. Reasonable care should be taken to avoid puncture by sharp objects or concentrated loads.

## 10 Maintenance

 Roofs covered with the system should be subject to annual inspections, as is good practice with waterproofing systems, to ensure continued security and performance.

## 11 Durability

 Under normal service conditions, the system will provide a durable roof waterproofing with a life of at least 30 years.

## Installation

### 12 General

12.1 Installation of the Firestone RubberCover EPDM System must be carried out by installers who have been trained by the Certificate holder (or the Certificate holder's authorised representatives), working in accordance with the relevant clauses of the Certificate holder's instructions, BS 8000-4: 1989 and this Certificate.

12.2 Conditions on site should be those for normal roof waterproofing work. Deck surfaces must be dry, clean and free from sharp projections such as nail heads and concrete nibs.

12.3 When the system is to be laid over a rough substrate, an appropriate isolating material, cover board or insulation board must be installed first.

12.4 Installation should not be carried out during wet weather (eg rain, fog or snow), nor when the temperature is below 0°C. Special precautions in accordance with the Certificate holder's instructions should be taken if the system is to be installed at temperatures below 5°C due to the risk of condensation contaminating the bonding adhesive.

12.5 The Water-Based Bonding Adhesive should not be applied if there is a possibility of freezing temperatures within 48 hours after application.

12.6 Contact with fresh bituminous, coal tar and oil-based products must be avoided as the membrane is not compatible with lower grades of bitumen. If contact with such products is likely, an isolating layer should be interposed before installing the waterproofing sheet. Where doubt arises, the advice of the Certificate holder should be sought.

12.7 The membrane must be fully adhered continuously through all angle changes and to all upstands. The membrane must be properly terminated at the top of the upstand with the Certificate holder's approved detail.

12.8 The membrane should be unrolled into position and allowed to condition for 30 minutes prior to fixing and/or lap jointing. Care must be taken to avoid ripples or folds in the sheets.

## **13 Procedure**

13.1 All insulation boards must be attached using an appropriate adhesive or mechanical method according to the type of air and vapour control layer used in the system. The method of attachment must be adequate to provide resistance to wind uplift forces as defined in BS EN 1991-1-4: 2005. When installed over glass-fibre, mineral wool-based or polystyrene insulations, a suitable separation layer is either mechanically fastened or bonded over the insulation prior to application of the waterproofing.

13.2 The resistance to wind uplift will be limited by the cohesive strength of the insulation and method of attachment. These factors should be taken into account when selecting the insulation material. Faced polyurethane should be mechanically fixed to prevent bowing.

13.3 The fully bonded application may not be used directly onto insulation materials that will be adversely affected by the solvent in the adhesive (eg polystyrene). The width of the membrane should not exceed 6.1 metres for this type of application.

13.4 Alternatively, a layer of RubberCover Water-Based Bonding Adhesive should be applied to the approved substrate at an application rate of 1.47 to 2.45 metres square per litre. The membrane should be applied to the adhesive while wet and rolled to ensure a full bond and that no air has been trapped beneath the membrane.

13.5 Alternatively, a layer of RubberCover Bonding Adhesive BA-2012 should be roller- or spray-applied to both the substrate and the membrane at an approximate rate of 0.3 to 0.43 litres per square metre. When the adhesive has become touch dry, the membrane should be applied to the substrate and compressed with a stiff brush to ensure a full bond and that air has not been trapped beneath the membrane.

## **14 Details**

### **Seaming procedure - QuickSeam Cover Strip**

14.1 Where jointing is necessary, the membranes should be butted together with a maximum gap of 5 mm. The area must be cleaned with QuickPrime Plus (alternatives should not be used). QuickSeam Cover Strip is positioned centrally over the joint and unrolled. The seam should be rolled with a silicone roller. Care must be taken to avoid ripples or folds.

### **Outside corner detail - QuickSeam Corner Flashing**

14.2 Where an external corner flashing is necessary, the Firestone RubberCover EPDM membrane should be cut to accommodate the corner of the kerb/wall. The area must be cleaned with QuickPrime Plus (alternatives should not be used). The resultant area should be flashed with QuickSeam SA Flashing. The base of the corner should be cleaned with QuickPrime Plus and QuickSeam Corner Flashing applied and hand moulded to accommodate the angle changes at the base of the corner. The completed detail should be rolled with a silicone roller. Care must be taken to avoid ripples or folds.

### **Folded corner detail - QuickSeam Corner Flashing**

14.3 Where an inside corner flashing is necessary, the Firestone RubberCover EPDM membrane should be folded into a 'pig-ear'. The contact area of the pig-ear should be cleaned (both mating surfaces) with QuickPrime Plus. The pig-ear must then be adhered to the upstand.

## **Circular pipe flashing**

14.4 Circular pipes of 25 to 150 mm diameter are flashed using a pre-moulded QuickSeam Pipe Flashing. The flashing should be cut according to the sizing rings to suit the pipe diameter. The horizontal roof area around the base of the pipe should be prepared with QuickPrime Plus primer and allowed to become touch dry. QuickSeam Pipe Flashing is installed over the pipe and with the base flange flush to the roof surface, removing the release paper to mate the QuickSeam adhesive underside to the primed roof area. The bond is consolidated by using a silicone roller to remove any trapped air. The detail is finished at the top edge with a bead of waterproof mastic. A stainless steel strap is used to secure the pipe.

## **Internal rainwater outlet**

14.5 With the Firestone RubberCover EPDM membrane already adhered to the substrate, a pre-fabricated rainwater outlet insert is installed. It should be ensured that connection to the roof drainage system is secure and, using appropriate fixings, it is fastened to the structure. The flange of the outlet insert and the surrounding area is primed using QuickPrime Plus primer. QuickSeam SA Flashing is installed, sized minimum 75 mm larger than the outlet insert flange in each direction. QuickSeam SA Flashing is rolled with a silicone roller to consolidate the bond and remove any trapped air. A central area is cut away from the QuickSeam SA Flashing directly over the outlet. A suitable push-fit leaf guard is installed upon completion. The Certificate holder's advice should be sought regarding compatible rainwater outlet inserts.

## **Horizontal or through-wall outlet flashing**

14.6 With the Firestone RubberCover EPDM membrane already adhered to the substrate, a pre-fabricated rainwater outlet insert is installed. It should be ensured that connection to the roof drainage system is secure and, using appropriate fixings, it is fastened to the structure. The flange of the outlet insert and the surrounding area is primed using QuickPrime Plus primer. The 450 mm QuickSeam Form Flash is installed, sized minimum 75 mm larger than the outlet insert flange in each direction. QuickSeam Form Flash is rolled with a silicone roller to consolidate the bond and remove any trapped air. A central area of QuickSeam Form Flash is cut away from the outlet opening. The Certificate holder's advice should be sought regarding compatible rainwater outlet inserts.

## **Perimeter edge trim**

14.7 The Firestone RubberCover EPDM membrane is fully adhered over the perimeter edge. An appropriate pre-fabricated trim is installed to the roof edge, fastening the horizontal flange of the trim through the membrane and into the structure at maximum 200 mm centres using appropriate fasteners. The edge trim should be sealed by installing a strip of QuickSeam Cover Strip in conjunction with QuickPrime Plus primer, ensuring adequate coverage of the fixings and a minimum 50 mm lap onto the Firestone RubberCover EPDM membrane. The Certificate holder's advice should be sought regarding compatible roof edge trims.

# **15 Repair**

In the event of damage to the system, repairs can be carried out by cleaning the area around the damage and applying a patch of QuickSeam SA Flashing in accordance with the Certificate holder's instructions.

## **Technical Investigations**

# **16 Tests**

16.1 Tests were carried out and the results assessed to determine:

- thickness
- width
- mass per unit area
- water vapour transmission
- watertightness
- tensile strength/elongation
- tear strength

- low temperature flexibility
- dimensional stability
- static loading
- dynamic impact
- fatigue cycling
- peel from substrate
- wind uplift
- heat ageing
- UV ageing
- bitumen compatibility.

16.2 Existing data for QuickSeam SA Flashing and QuickSeam Cover Strip were examined in respect of:

- resistance to peel
- thickness
- dimensional stability
- resistance to tear
- low temperature flexibility
- resistance to impact
- water absorption
- tensile strength and elongation on controls and after heat ageing (24 weeks at 70 °C and 24 weeks at 80 °C).

## 17 Investigations

17.1 The manufacturing process was evaluated, including the methods adopted for quality control, and details were obtained of the quality and composition of the materials used.

17.2 An evaluation was made of existing data on the fire performance of the system.

## Bibliography

BS 6229 : 2003 *Flat roofs with continuously supported coverings - Code of practice*

BS 8000-4 : 1989 *Workmanship on building sites - Code of practice for waterproofing*

BS 8217 : 2005 *Reinforced bitumen membranes for roofing - Code of practice*

BS EN 1991-1-4: 2005 + A1 : 2010 *Eurocode 1 : Actions on structures - General actions - Wind actions*

BS EN 13501-5 : 2005 *Fire classification of construction products and building elements - Classification using data from external fire exposure to roofs tests*

BS EN 13956 : 2012 *Flexible sheets for waterproofing - Plastic and rubber sheets for roof waterproofing - Definitions and characteristics*

BS EN ISO 9001 : 2008 *Quality management systems - Requirements*

### 18 Conditions

18.1 This Certificate:

- relates only to the product/system that is named and described on the front page
- is issued only to the company, firm, organisation or person named on the front page - no other company, firm, organisation or person may hold claim that this Certificate has been issued to them
- is valid only within the UK
- has to be read, considered and used as a whole document - it may be misleading and will be incomplete to be selective
- is copyright of the BBA
- is subject to English Law.

18.2 Publications, documents, specifications, legislation, regulations, standards and the like referenced in this Certificate are those that were current and/or deemed relevant by the BBA at the date of issue or reissue of this Certificate.

18.3 This Certificate will remain valid for an unlimited period provided that the product/system and its manufacture and/or fabrication, including all related and relevant parts and processes thereof:

- are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA
- continue to be checked as and when deemed appropriate by the BBA under arrangements that it will determine
- are reviewed by the BBA as and when it considers appropriate.

18.4 The BBA has used due skill, care and diligence in preparing this Certificate, but no warranty is provided.

18.5 In issuing this Certificate the BBA is not responsible and is excluded from any liability to any company, firm, organisation or person, for any matters arising directly or indirectly from:

- the presence or absence of any patent, intellectual property or similar rights subsisting in the product/system or any other product/system
- the right of the Certificate holder to manufacture, supply, install, maintain or market the product/system
- actual installations of the product/system, including their nature, design, methods, performance, workmanship and maintenance
- any works and constructions in which the product/system is installed, including their nature, design, methods, performance, workmanship and maintenance
- any loss or damage, including personal injury, howsoever caused by the product/system, including its manufacture, supply, installation, use, maintenance and removal
- any claims by the manufacturer relating to CE marking.

18.6 Any information relating to the manufacture, supply, installation, use, maintenance and removal of this product/system which is contained or referred to in this Certificate is the minimum required to be met when the product/system is manufactured, supplied, installed, used, maintained and removed. It does not purport in any way to restate the requirements of the Health and Safety at Work etc. Act 1974, or of any other statutory, common law or other duty which may exist at the date of issue or reissue of this Certificate; nor is conformity with such information to be taken as satisfying the requirements of the 1974 Act or of any statutory, common law or other duty of care.



# BRITANNIA METADOR

— STEEL DOORS —



Metador Defender.  
The best steel door system  
on the market \*



Here's the small print:

\* It's true - our customers keep telling us!

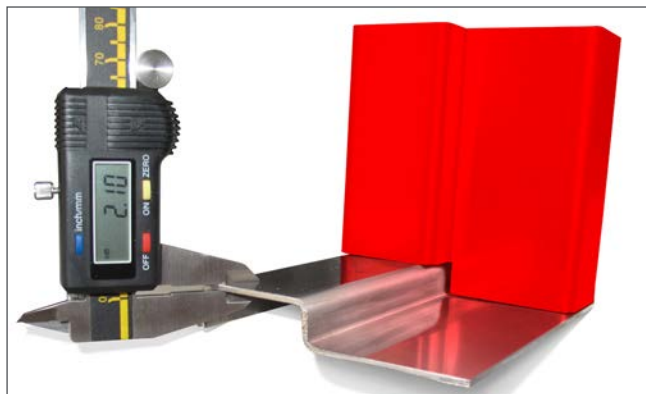


# Metador Defender

Why it's the best steel door system for you...



**Metador Defender has bolted corners.**  
Stronger for your customers - and quicker for you.



**Metador Defender has a 2mm stainless steel threshold.**

If it skimps on materials - it's not Metador.



**Metador Defender has a high insulation mineral wool core as standard.**

Ever wondered how a door with a cardboard honeycomb core can give the insulation your customer wants? It doesn't.



**Metador Defender is manufactured from galvanised material throughout.**  
Never from Zintec or Galvaneal.



**Metador Defender has 1.5mm leaf skins.**  
That's 56% stronger than the standard 1.2mm.

**Metador Defender has 16 threaded adjusters as standard - 8 fixing points each side of the door.**

**4 grade 13 stainless steel hinges with dog bolts.**

**Metador Defender is certified to international standards.**

- CE Marked
- ISO 9001:2008
- Thermal Transmittance - Door Panel to 0.75W/m<sup>2</sup>K
- BS EN 1634-1:2008 Fire Rating Test





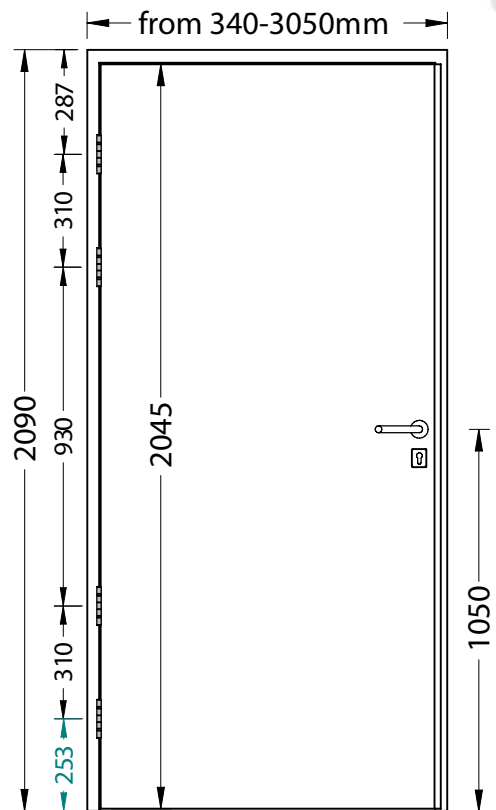
## Why it's the best for your customers...

When your customers need doors, they often need them in a hurry. Long lead times are unhelpful for your customers, and can so easily damage your reputation. With the Defender modular construction, we can make up doorsets of any width from 340mm upwards within 1-3 days, allowing you to give a service that exceeds your customers' wildest expectations.

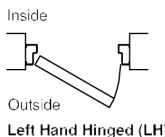
And your customers not only get a great service, they get a superb product.



A set of sub-assemblies for a complete Metador Defender door system

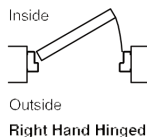


### Outward Opening



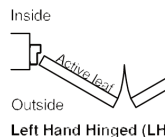
Left Hand Hinged (LH)

### Inward Opening



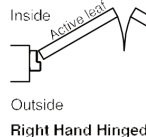
Right Hand Hinged (RH)

### Outward Opening



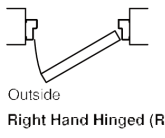
Left Hand Hinged (LH)

### Inward Opening



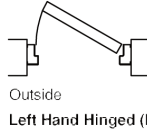
Right Hand Hinged (RH)

### Inside



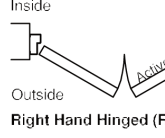
Right Hand Hinged (RH)

### Inside



Left Hand Hinged (LH)

### Inside

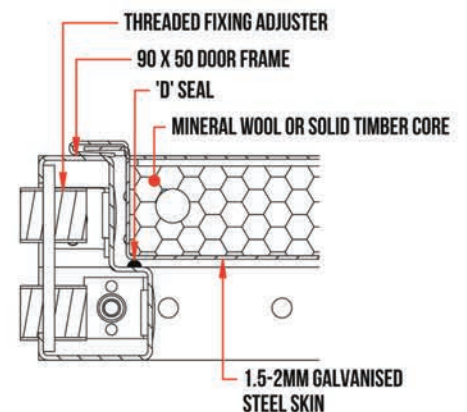


Right Hand Hinged (RH)

### Inside



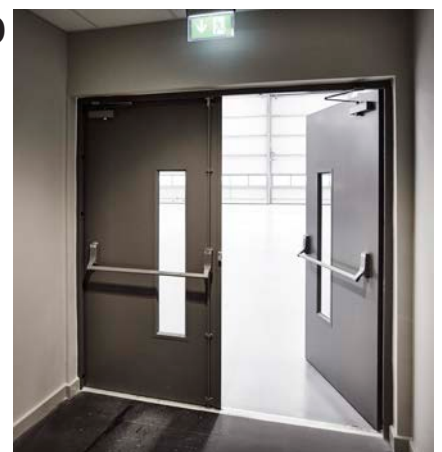
Left Hand Hinged (LH)



## A successful partnership

Learn more about how you can be a part of the Metador Defender success story - talk to Britannia Metador. And very soon, your customers will be telling you:

'Metador Defender is the best steel door system on the market!'





# Britannia Metador

Established in 2004, Britannia Metador has become one of the UK's leading steel door manufacturers.

Having amassed a wealth of knowledge in design, manufacture and installation of security products, we could see that the market needed a completely new approach to steel door systems.

## A champion is born

After an exhaustive research and development programme, in 2012 the Metador Defender was born. Promising to shatter the quality issues and time constraints of standard steel doors, Defender was an immediate success.

## Opening doors for your business

Alongside this world-beating product, Britannia Metador has built an enviable reputation for quality products, on-time delivery, and the endearing habit of looking after our customers.

## Contact us

To talk about what we can do for your business, call us now. Or print the enquiry form on the next page and send it to us.

**01642 337 119**

[security@britanniametador.com](mailto:security@britanniametador.com)



Britannia Metador  
Britannia House  
John Boyle Road  
Middlesbrough  
TS6 6TY  
UK

+44 (0)1642 337 119  
[www.britanniametador.com](http://www.britanniametador.com)




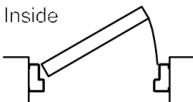



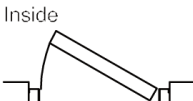


**BRITANNIA  
METADOR**  
— STEEL DOORS —

*Opening doors for your business*



# Metador enquiry form

Need a door? Fill out this form and send to us for a no-obligation free quotation.

<b>Quantity:</b>	<b>Date:</b>
<b>Structural Opening Width:</b>	<b>Company Name:</b>
<b>Structural Opening Height:</b>	<b>Address:</b>
<b>Colour:</b>	
<b>Hardware:</b>	<b>Telephone No:</b>
	<b>Email:</b>
<b>Handing:</b>	
<div><div><p><b>Outward Opening</b></p><p>Inside</p><p>Outside</p><p><b>Left Hand Hinged (LH)</b></p></div><div><p><b>Inward Opening</b></p><p>Inside</p><p>Outside</p><p><b>Right Hand Hinged (RH)</b></p></div><div><p><b>Outward Opening</b></p><p>Inside</p><p>Outside</p><p><b>Left Hand Hinged (LH)</b></p></div><div><p><b>Inward Opening</b></p><p>Inside</p><p>Outside</p><p><b>Right Hand Hinged (RH)</b></p></div><div><p>Inside</p><p>Outside</p><p><b>Right Hand Hinged (RH)</b></p></div><div><p>Inside</p><p>Outside</p><p><b>Left Hand Hinged (LH)</b></p></div><div><p>Inside</p><p>Outside</p><p><b>Right Hand Hinged (RH)</b></p></div><div><p>Inside</p><p>Outside</p><p><b>Left Hand Hinged (LH)</b></p></div></div>	
<b>Drawing (Optional):</b>	
<b>Other Comments/Details:</b>	

Simply print this form, fill it in (with as much detail as possible), scan it and email to:

**security@britanniametador.com**

Or fax to: **0845 371 0404** - or talk to us on: **01642 337 119**